

PERMIT TO OPERATE

Number 70-5

EQUIPMENT OWNER-OPERATOR:

Paso Robles Landfill
1000 Spring Street
Paso Robles, California 93446

EQUIPMENT LOCATION:

9000 Highway 46 East
Paso Robles, California

FOR THE EQUIPMENT LISTED HEREIN AND SUBJECT TO THE LISTED CONDITIONS

Issued December 12, 2001 (*effective January 1, 2002*) January 1, 2007
ISSUANCE DATE **ANNIVERSARY**

ROBERT W. CARR
Air Pollution Control Officer

DAVID W. DIXON
Engineering Supervisor

Application Number: 3080

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Conventions and Abbreviations

- A. The following conventions are used in this permit.
1. Referencing of conditions: The reference for each requirement will be noted in [square brackets]. References that are noted as being "District-only" are not federally-enforceable requirements. **All conditions with references in [square brackets] that do not contain the phrase "District-only" must be considered federally-enforceable requirements.**
 2. Requirements based on current District rules will be noted by the phrase "Rule" followed by the rule number. Requirements based on District rules approved into the State of California Implementation Plan (SIP) will be noted by the phrase "SIP Rule," followed by the rule number as it appears in the SIP.
 3. Concerning citations for the basis of conditions. If the SIP version of a rule is the same as the current version of a rule, only the SIP version will be cited because including both is considered redundant. If the SIP version of a rule is different than the current version, both will be included. *e.g.*, SIP Rule 205 and Rule 206 have identical allowances for the APCO to issue conditional permits, so the former will be cited for any federally-enforceable requirement that cannot be directly attributed to a rule, regulation, or law. Conversely, Rule 206 will be cited for District-only enforceable requirements not attributable to a rule, regulation, or law.
 4. If there is no over-riding need to have the current version of a permit condition be considered federally-enforceable, it will be listed as "District-only." An example of an over-riding need where the current condition would be considered federally-enforceable might be when that condition is needed to support a federally-enforceable limit.
 5. In multi-part conditions, the general reference notation at the beginning of the condition will apply throughout except for those subparts that are followed by a specific reference.
 6. Unless otherwise noted, a "day" shall be considered a 24 hour period from midnight to midnight (*i.e.*, calendar day).
 7. The number of values displayed for any given emission or operational limit in this permit is intended to represent the number of significant figures to which test or analysis results are to be rounded. *e.g.*, 2,000 ppmv is intended to represent 2.000E3 ppmv and any test result greater than 2,000.5 ppmv would not comply with that limit.
 8. When rounding test and analysis results or recorded and reported values to the correct number of significant figures, any rounding of the value "five (5)" should result in an even number. *e.g.*, 34.65 to three significant figures would be written 34.6. Also when rounding, if the final digit is 0, 1, 2, 3, or 4, the number does not change and, if the final digit is 6, 7, 8, or 9, the number is increased by one.

9. Federal regulation subpart references will typically be indicated by their subpart designation followed by a section number. The titles of all subparts included here are as follows:

40CFR60.30c-36c, Subpart Cc, Emission Guidelines for Landfills

40CFR60.750-759, Subpart WWW, Standards of Performance for Landfills

40CFR62.14350-14356, Subpart GGG, Federal Plan Requirements for Landfills

10. District rule numbers only will be used for the most part in this permit. Rule titles are as follows (parentheses indicate an identical title for both the SIP and the current versions of a rule):

(SIP) Rule 106, Standard Conditions

Rule 107, Upset and breakdown Conditions

SIP Rule 113, Particulate Matter

SIP Rule 114, Gaseous Contaminants

SIP Rule 201.E, Posting of Permit to Operate

Rule 201, Equipment Not Requiring a Permit

Rule 202, Permits

Rule 204, Requirements (a.k.a. New Source Review)

SIP Rule 205, Conditional Approval

Rule 206, Conditional Approval

Rule 210, Periodic Inspection, Testing and Renewal of Permits to Operate

Rule 216, Federal Part 70 Permits

Rule 302, Schedule of Fees

(SIP) Rule 401, Visible Emissions

Rule 402, Nuisance

Rule 403, Particulate Matter Emission Standards

(SIP) Rule 404, Sulfur Compounds Emission Standards, Limitations and Prohibitions

(SIP) Rule 406, Carbon Monoxide Emission Standards and Limitations

SIP Rule 407, Organic Material Emission Standards, Limitations and Prohibitions

Rule 407, Organic Material Emission Standards

(SIP) Rule 416, Degreasing Operations

Rule 426, Landfill Gas Emissions

(SIP) Rule 501, General Burning Provisions

- B. Abbreviations used in this permit are as follows:

40CFR	Chapter 40 to the Code of Federal Regulations
APCO	Air Pollution Control Officer
bhp	brake horsepower
Btu	British thermal unit
CARB	California Air Resources Board
CCR	California Code of Regulations
CO	carbon monoxide

CO ₂	carbon dioxide
CIWMB	California Integrated Waste Management Board
dscf	dry standard cubic foot
EPA	United States Environmental Protection Agency
°F	degrees Fahrenheit
gal	gallon
gr	grains
H&SC	California Health and Safety Code
H ₂ S	hydrogen sulfide
hp	horsepower
hr	hour
lb	pounds
LFG	landfill gas
mmBtu	million British thermal unit of heat input
MSDS	Material Data Safety Sheet
NMOC	non-methane organic compounds
NO _x	oxides of nitrogen
O ₂	oxygen
ppmv	parts per million by volume
psia	pounds per square inch absolute
RWQCB	Regional Water Quality Control Board
scf	standard cubic feet
scfm	standard cubic feet per minute
SIC	Standard Industrial Classification
SIP	State of California Implementation Plan
TOC	total organic compounds
tpy	tons per year
vol%	percent by volume
wt%	percent by weight

I. Emission and Operational Limits

A. Specific Emission Limits. The following emission limits shall apply to the specified units.

Unit	Emission	Limit		Compliance	Notes
flare	NMOC	1.	98wt% destruction; or	biennial test	[District-only, Rule 426.F.1]
		2.	30.0 ppmv@3% O ₂ dry		as methane [District-only, Rule 426.F.1]
	NO _x	3.	0.060 lb/mmBtu		[District-only, Rule 204.A.1]
	CO	4.	0.20 lb/mmBtu		[District-only, Rule 204.A.1]
landfill surface	TOC	5.	1,000 ppmv (a)	annual test	as methane [District-only, Rule 426.E.8]

Additional Note:

(a) For the purposes of this permit, a leak is defined as a concentration of total organic compounds exceeding 1,000 ppmv measured as methane at a distance of 1/2 inch from the surface being monitored path, other than non-repeatable, momentary readings. [District-only, Rule 206]

B. Specific Operational Limits. The following operational limit shall apply.

Description		Parameter	Limit	Compliance	Notes
1.	landfill gas	sulfur content	50 gr/100 dscf	biennial testing	as H ₂ S, intentional duplication of condition III.A.1.d.2 [SIP Rule 404.E and District-only, Rule 204.A.1]

II. Facility Description

A. General. This facility consists of a municipal solid waste landfill (SIC code 4953). It has a design capacity of 4.6 million tons of waste (3.7 megagrams) and had approximately 665,000 tons of waste in place as of 1999. Potential non-methane organic compound (NMOC) emissions are estimated to be approximately 8.3 tons per year (tpy), assuming no emissions controls. Therefore, this landfill is not required to install emission controls under either District Rule 426, Landfill Gas Emissions, or EPA's 40CFR62, Subpart GGG, Federal Plan Requirements for Municipal Solid Waste Landfills. However, as part of their effort to lessen landfill gas migration to areas beyond their property, the City of Paso Robles has installed a gas collection and ground-level flare destruction system of limited scope. Consequently, actual NMOC emissions are currently estimated to be about 1.3 tpy.

B. Specific Equipment. Major emission units are listed below but all associated valves, flanges, piping, condensate pots, and insignificant emission units as identified in section II.C below, which are not explicitly identified, are also included in this permit and subject to all applicable requirements.

1. Municipal Solid Waste Landfill, with a landfill gas collection system, flare, and condensate system consisting of:

TITLE		CAPACITY	DESCRIPTION
a.	landfill gas blower	15 hp	Lamson 3106
b.	enclosed ground flare	50-200 scfm	LFG&E Triton Model GF-200, propane fueled pilot, with no condensate injection
c.	LFG extraction wells		sampling port upstream of the throttle valve
d.	condensate storage tank	550 gal	including associated collection system

C. Insignificant Equipment. The following equipment and equipment types are considered environmentally insignificant. This equipment is not subject to the provisions of this permit except for those units that are subject to a federally-enforceable, generally applicable requirement as listed in section III.A.1.

Description	Basis for Insignificance
graders, loaders, utility trucks, and other mobile equipment	Rule 201.C.1
internal combustion engines rated at <50 bhp	Rule 201.B.1

diesel storage tanks used for vehicle refueling	Rule 201.I.4
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III. Conditions

A. Standard Conditions

1. **Generally Applicable Requirements.** For the purposes of this permit, all requirements shall be based on standard atmospheric conditions of sixty degrees Fahrenheit (60°F) and 14.7 psia. [SIP Rule 106]
 - a. Visible emissions shall not exceed Ringlemann #2 or forty percent (40%) opacity for a period exceeding three (3) minutes aggregated in any sixty (60) minute period of time. [H&SC 41701 and SIP Rule 401]
 - 1) This condition shall not apply to open outdoor fires, which have been approved by the APCO, for the purposes of employee instruction in fire fighting methods. [SIP Rule 401.B.3]
 - b. If the APCO determines that the operation of this equipment is causing a public nuisance, the City of Paso Robles shall take immediate action to eliminate such nuisance. [District-only, Rule 402]
 - c. Particulate matter emissions shall not exceed any of the following:
 - 1) 0.3 gr/dscf, on an hourly basis, for all emission units except combustion devices; [SIP Rule 113]
 - 2) that lb/hr amount identified in Table I of SIP Rule 113 depending on process rate; [SIP Rule 113]
 - 3) 0.3 gr/scf corrected to three percent (3%) O₂, wet, for combustion device emission units; or [SIP Rule 113]
 - 4) 0.3 gr/scf corrected to twelve percent (12%) CO₂ for combustion device emission units, except for the LFG flare. [District-only, Rule 403]
 - d. Sulfur Compound Limitations [SIP Rules 114.1 and 404.E]
 - 1) Sulfur compound emissions shall not exceed 0.2 vol% of sulfur compounds calculated as sulfur dioxide;
 - 2) Gaseous fuel sulfur content shall not exceed 50 gr/100 dscf (797 ppmv) total sulfur, as H₂S at standard conditions.
 - 3) Liquid fuel sulfur content shall not exceed 0.5 wt% sulfur.
 - e. Carbon monoxide emissions shall not exceed 2,000 ppmv at standard conditions, except for

internal combustion engines. [SIP Rule 406]

- f. Metal surface coatings shall not be thinned or reduced with photochemically reactive solvents, as defined in District Rule 407. [SIP Rule 407.H.2]
- g. Architectural coatings, which are purchased in containers of one (1) quart capacity or larger, shall not contain photochemically reactive solvents nor shall they be thinned or reduced with photochemically reactive solvents. [SIP Rule 407.H.3]
- h. No photochemically reactive solvent, or any material containing that amount of photochemically reactive solvent, may be evaporated in any given day during the disposal of that solvent or material. [SIP Rules 205 and 407.H.4]
- i. This facility must comply with all applicable provisions of the Air Toxic "Hot Spots" Act as set forth in Health and Safety Code Section 44300 (*et seq.*). [District-only, H&SC 44300 (*et seq.*) and, District-only, Rule 204.F.1]
- j. All abrasive blasting shall be conducted in accordance with Title 17 of the California Code of Regulations (CCR). [District-only, CCR92000 (*et seq.*) and, District-only, Rule 206]
 - 1) Each operator of this equipment shall be supplied with a copy of the abrasive blasting provisions of Title 17 and the APCO prepared summary of Title 17.
 - 2) Abrasive blasting of items smaller than eight feet (8') must be conducted within an enclosure or indoors.
 - 3) All dry, unconfined blasting shall utilize CARB certified abrasives.
 - 4) Areas surrounding the blasting operation shall be periodically washed, swept, vacuumed, or otherwise cleaned to prevent re-entrainment of dust.
- k. The APCO shall be notified in writing before any changes are made in the design, construction, or operation of this equipment or any modifications are made to process condition that might increase the emission of air contaminants. [District-only, Rule 202]
- l. The City of Paso Robles shall ensure that cold solvent metal cleaning devices, with the exception of wipe clean operations:
 - 1) utilize: [SIP Rule 416.B]
 - i. a container for the solvent and the articles being cleaned;
 - ii. a cover, easily operated with one hand, which prevents the solvent from evaporating when the cleaning device is not in use;

- iii. a shelf for draining cleaned parts such that the drained solvent is returned to the solvent storage container;
 - iv. a permanent, conspicuous label, which lists all applicable operating requirements; and
 - v. a freeboard ratio equal to or greater than 0.75, if the solvent surface area is greater than or equal to 5.4 square feet; and
- 2) are operated as follows. [SIP Rule 416.C]
- i. All degreasing equipment and emission control equipment must be operated and maintained in good working order.
 - ii. No solvent may be allowed to leak from the degreasing equipment.
 - iii. All solvent must be stored and disposed of in a manner that prevents its evaporation to the atmosphere.
 - iv. The cover of any cleaning device shall not be removed unless that device is in use or undergoing maintenance.
 - v. The operator shall drain parts for at least fifteen (15) seconds after cleaning or until dripping ceases.
 - vi. Flowing solvent shall consist of a liquid stream and not a fine, atomized, or shower type spray; and the motive pressure for that solvent flow shall be sufficiently low to prevent the splashing of solvent beyond the container.
- m. The City of Paso Robles shall not ignite or maintain an open outdoor fire except as approved by the APCO for the purposes of employee instruction in fire fighting methods. [SIP Rule 501.A]

2. Compliance with Permit Conditions

- a. The City of Paso Robles shall comply with all terms and conditions of this permit. [District-only, Rule 206 for "District-only" enforceable conditions and Rule 216.F.1.f for all others]
- b. While temporarily operating at the City of Paso Robles landfill, any portable wood waste grinding equipment, trommel screen, or internal combustion engine, which provides the motive power for that grinding equipment or screen, shall comply with all applicable requirements of this permit. [District-only, Rule 206 for "District-only" enforceable conditions and SIP Rule 205 for all others]
- c. The need to halt or reduce a permitted activity in order to maintain compliance shall not be

- used as a defense for noncompliance with any permit condition. [Rule 216.F.1.g]
- d. This permit may be reopened by the APCO at any time for cause. For the purposes of this permit, the following circumstances shall constitute cause: [Rule 216.F.1.h & K.1]
- 1) The City of Paso Robles landfill becomes subject to an additional federally- enforceable requirement, the remaining term of this permit is three years or more, and the effective date of that requirement is not later than the date on which this permit is due to be reissued; [Rule 216.K.1.a]
 - 2) The APCO or the EPA determine that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards, terms, or conditions of the permit; or [Rule 216.K.1.c]
 - 3) The APCO determines that this permit must be revised or revoked to assure compliance with any applicable requirement, or EPA determines that the permit must be revised or revoked to assure compliance with any federally-enforceable requirement. [Rule 216.K.1.d]
- e. This permit does not convey property rights or exclusive privilege of any sort. [Rule 216.F.1.i]
- f. Within a reasonable time period, the City of Paso Robles shall furnish any information requested by the APCO, for the purpose of determining:
- 1) compliance with this permit; [Rule 216.F.1.j.2]
 - 2) air contaminant emissions; [SIP Rule 205]
 - 3) whether or not cause exists to modify, revoke, reissue, or terminate this permit; or [Rule 216.F.1.j.1]
 - 4) whether or not cause exists for an enforcement action. [Rule 216.F.1.j.2]
- g. Continuing non-compliance with any federally-enforceable permit condition is grounds for permit termination, revocation and reissuance, modification, enforcement action, or denial of permit renewal. [Rule 216.F.1.f]
- h. If the City of Paso Robles is not in compliance with any federally-enforceable requirement, they shall submit to the APCO a schedule of compliance, which has been approved by the Hearing Board. [Rule 216.F.2.c]
- i. A pending permit action, or notification of anticipated noncompliance, does not stay any condition of this permit. [Rule 216.F.1.e]

- j. All terms and conditions of this permit are enforceable by the EPA Administrator and citizens of the United States under the federal Clean Air Act unless referenced as being based on a District-only requirement. All terms and conditions of this permit, including those referenced as being based on a District-only requirement, are enforceable by the APCO. [Rule 216.F.3]
 - k. This permit, or a true copy, shall be made readily accessible at the City of Paso Robles? landfill office and shall not be altered or defaced in any way. [SIP Rule 201.E&F]
 - l. The terms and conditions of this permit shall apply to the equipment listed herein, which is operated by either the City of Paso Robles or their contractor(s), and located at 9000 Highway 46 East, Paso Robles, California, or on contiguous properties to that address, which are owned and controlled by the City of Paso Robles and are classified as having a SIC code of 4953. [SIP Rule 205]
- 3. Emergency Provisions.** The City of Paso Robles shall comply with the requirements of District Rule 107, Upset and Breakdown Conditions. [Rule 107]
- 4. Federal Regulation and District Compliance Plans**
- a. The landfill gas collection and control system shall be maintained and operated as specified in the materials submitted with Applications 2166 and 2965, including the Operations and Maintenance Manual dated June 1997. [District-only Rule 204.A.1]
 - b. The City of Paso Robles shall continue to comply with those permit conditions with which it is in compliance, as identified in this permit. [Rule 216.F.1.f & L.2.b]
 - c. The City of Paso Robles shall comply with all federally enforceable requirements that become applicable during the permit term, in a timely manner, as identified in this permit. [Rule 216.F.1.f & L.2.c]
 - d. The City of Paso Robles shall comply with all APCO approved compliance plans. [District-only, Rule 206]
- 5. Right of Entry.** The Regional Administrator of U.S. Environmental Protection Agency, the Executive Officer of the California Air Resources Board, the APCO, or their authorized representatives, upon the presentation of credentials, shall be permitted to enter upon the premises and, at reasonable times, be permitted to: [Rule 216.F.2.a]
- a. inspect the stationary source, including equipment, work practices, operations, and emission-related activity;
 - b. inspect and duplicate records required by this Permit to Operate; and
 - c. sample substances or monitor emissions from the source or other parameters to assure compliance with the permit or applicable requirements. Monitoring of emissions can include

source testing.

6. **Severability.** The provisions of this Permit to Operate are severable, and, if any provision of this Permit to Operate is held invalid, the remainder of this Permit to Operate shall not be affected thereby. [Rule 216.F.1.e]
7. **Circumvention.** The City of Paso Robles shall not build, erect, install, or use, any article, machine, equipment, or process subject to an applicable standard, if the use of which conceals an emission that would otherwise constitute a violation of that standard. [District-only, Rule 206]
8. **Permit Life.** This Permit to Operate shall become invalid five (5) years from the original effectiveness date unless a timely and complete renewal application is submitted to the APCO. The City of Paso Robles shall apply for renewal of this permit no later than six (6) months before the date of expiration. Upon submittal of a timely and complete renewal application, this permit to operate shall remain in effect until the APCO issues or denies the renewal application. [Rule 216.I.1, I.2, & I.4]
9. **Payment of Fees.** The City of Paso Robles shall remit Title V compliance determinations fees to the District in response to the District's invoice on a timely basis. Failure to remit fees in accordance with District Rule 302 shall result in forfeiture of this Permit to Operate. Operation without a permit to operate subjects the source to potential enforcement action by the District and the EPA pursuant to section 502(a) of the Clean Air Act. [Rule 216.F.1.k]
- B. **Specific Recordkeeping, Inspection, and Reporting Requirements.** All records shall be retained for a minimum of five (5) years and be made available to the APCO upon request. For the purposes of this permit, records shall be considered all calibration and maintenance records, all original strip-chart or electronic recordings for continuous monitoring and instrumentation, all records specifically required to be maintained herein, and copies of all reports required to be submitted herein. [District-only, Rule 206, for "District-only" records and Rule 216.F.1 for all other records]
1. **Recordkeeping.** The City of Paso Robles shall record the following information.
 - a. A map indicating the location and date of cover placement for each area with intermediate and final cover. [District-only, Rule 426.H.1.a]
 - b. The results of all perimeter well testing. [District-only, Rule 426.H.1.b]
 - c. The results of all methane or NMOC emission tests including off-site migration tests, perimeter well tests, and surface cover tests. [District-only, Rule 426.H.1.c]
 - d. On a calendar year basis, the tons of waste accepted for the prior year. [40CFR60.758.a as referenced by 40CFR62.14355 and District-only, Rule 426.H.1.d]
 - e. On a calendar quarter basis, the current amount of waste in place. [40CFR60.758.a as

referenced by 40CFR62.14355]

- f. Continuous data for LFG flow to the flare and flare temperature, including dates and times of those values. [District-only, Rule 204.A.1]
 - g. Weekly flare inlet data collected under condition III.B.3.b below. [District-only, Rule 204.A.1]
 - h. Monthly records of cumulative flare system failure, upset, or downtime. [District-only, Rule 204.A.1]
 - i. The manufacturer's brand name and designation of each solvent used to thin or reduce any coating that is applied to a metal surface by either the City of Paso Robles or any contractor employed by the City of Paso Robles. Purchase records will be sufficient to satisfy this recordkeeping requirement. MSDS information sufficient to determine the non-photochemical reactivity of those solvents shall be maintained within easy access of this record. [SIP Rule 407.H.2]
 - j. The manufacturer's brand name and designation of each architectural coating used in containers of one quart capacity or larger, and the solvent used to thin or reduce those coatings, that is applied by either the City of Paso Robles or any contractor employed by the City of Paso Robles. Purchase records will be sufficient to satisfy this recordkeeping requirement. MSDS information sufficient to determine the non-photochemical reactivity of those coatings and solvents shall be maintained within easy access of this record. [SIP Rule 407.H.3]
- 2. Permanent Records.** The City of Paso Robles shall maintain a record of the following information for the life of the equipment authorized by this permit. [40CFR60.758.a as referenced by 40CFR62.14355]
- a. The maximum design capacity report, as represented in the application for this permit, and the maximum design capacity and effective date for any subsequent changes in that capacity.
- 3. Inspections, Calibrations, and Sampling.** The City of Paso Robles shall inspect, calibrate, or sample, the following processes as indicated. The results shall be recorded in an operational log or as specified. [District-only, Rule 206]
- a. On a continuous basis, the City of Paso Robles shall monitor: [District-only, Rule 204.A.1]
 - 1) the total gas collection flow rate for the landfill, and
 - 2) the flare temperature.
 - b. On a weekly basis, the City of Paso Robles shall monitor and record the oxygen concentration at the inlet to the flare. [District-only, Rule 204.A.1]

4. Unusual Operating Conditions, Actions, and Reporting

- a. A landfill surface concentration in excess of 1,000 ppmv TOG, as methane, shall not be considered a violation of conditions I.A.5, if the following actions are taken. [District-only, Rule 206]
 - 1) The leak is tagged with a marker that displays the date of leak detection. The marker shall remain in place until the leak is repaired and reinspected. [District-only, Rule 426.E.8.b]
 - 2) The leak shall be repaired to a leak-free state within three (3) calendar days of detection, unless its repair requires excavation. For the purposes of this permit, the installation of a new well is considered an excavation. [District-only, Rules 426.E.8.b]
 - 3) If a leak repair requires excavation, the City of Paso Robles shall submit an excavation plan within fifteen (15) calendar days of initial detection for the APCO's approval. The excavation plan shall include the expected date of completion. [District-only, Rule 426.E.8.c]
 - 4) Leaks shall be repaired to a leak-free state using at least one of the following methods: [District-only, Rule 426.E.8.d]
 - i. increasing the gas collection flow rate of existing wells;
 - ii. repairing the landfill cover;
 - iii. installing additional gas collection wells;
 - iv. repairing the gas transfer path; or
 - v. an equivalent method subject to the approval of the APCO.
- b. Any deviation from any requirement in this permit, excluding those reported under District Rule 107 as required by condition III.A.3, shall be reported to the APCO as follows: [Rule 216.F.1.o]
 - 1) As soon as reasonably possible, but in any case within four (4) hours, after its detection.
 - 2) As soon as the occurrence has been corrected, but no later than ten (10) calendar days after the event, through a written report that includes the probable cause of the deviation and the corrective actions or preventative measures taken.

5. Landfill Gas Emission Rate

- a. The City of Paso Robles shall calculate the landfill's NMOC emission rate no less frequently than annually. [40CFR60.752.b as referenced by 40CFR62.14353.b]

- 1) The following equation shall be used for the NMOC emission rate: [40CFR60.754.a.1.i as referenced by 40CFR62.14354.a]

$$M_{NMOC} = \sum_{i=1}^n 2kL_oM_i(e^{-kt_i})(C_{NMOC})(3.6 \times 10^{-9})$$

where,

M_{NMOC} = total NMOC emission rate from the landfill, in megagrams per year

k = methane generation rate constant, in year⁻¹

L_o = methane generation potential, in cubic meters per megagram solid waste

M_i = mass of solid waste in the i^{th} section, in megagrams

t_i = age of the i^{th} section, in years

C_{NMOC} = concentration of NMOC, in parts per million by volume as hexane

3.6×10^{-9} = conversion factor

- 2) The time period of calculation shall be July 1 of the previous year through June 30 of the current year. [SIP Rule 205]
- 3) If site specific values are not determined, the values to be used in the M_{NMOC} calculation are: $k=0.05$, $L_o=170 \text{ m}^3/\text{mg}$, and $C_{NMOC}=4,000 \text{ ppmv}$ as hexane. [40CFR60.754.a.1 as referenced by 40CFR62.14354.a]
- 4) If a site specific value for C_{NMOC} is determined, that determination shall be based on installing at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years, not to exceed 50 probes. The sample probes should be located to avoid known areas of nondegradable solid waste. [40CFR60.754.a.3 as referenced by 40CFR62.14354.a]
- i. The City of Paso Robles shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using EPA Method 25C. If composite sampling is used, equal volumes shall be taken from each sample probe. If more than the required number of samples are taken, all samples shall be used in the analysis. The City of Paso Robles shall divide the NMOC concentration

- determined using Method 25C by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.
- ii. To perform a Tier II emission rate calculation, the City of Paso Robles shall use the average NMOC concentration from the collected samples instead of the default value in condition III.B.5.a.3 above.
- 5) If a site specific value for k is determined, that determination shall use the procedures provided in EPA Method 2E. [40CFR60.754.a.4 as referenced by 40CFR62.14354.a]
- i. To perform a Tier III emission rate calculation, the City of Paso Robles shall use the site specific values for k, as determined here, and the site specific value for C_{NMOC} , as determined in III.B.5.a.4 above, instead of the default values in condition III.B.5.a.3 above.
- 6) The use of a site specific value for L_0 must receive prior approval from the EPA Region IX administrator. [40CFR62.14350.b.4]
- 7) Any alternative emission calculation methodology to that described above must receive prior approval from the EPA Region IX administrator. If such a methodology incorporates emission reductions from the ground-level flare, this permit must be modified to ensure that the limits in condition I.a.1&2 above, and all associated recordkeeping and reporting conditions, are federally-enforceable. [40CFR62.14350.b.4]
- b. If the emission rate calculation is less than 50 megagrams per year, the City of Paso Robles shall submit a summary and the results of that calculation to the APCO annually as specified in condition III.B.6.b.2 below and redetermine the site-specific NMOC concentration, C_{NMOC} , every five (5) years using the methods specified above. [40CFR60.752.b.1.i as referenced by 40CFR62.14353.b and 40CFR60.754.a.3.iii & 754.a.4.ii as referenced by 40CFR62.14354.a]
- c. If the emission rate calculation is equal to or greater than 50 megagrams per year, then the City of Paso Robles shall comply with 40CFR60.752.b.2 within 30 months of the end of the period for which emissions were calculated. [40CFR60.36c.b, 40CFR60.752.b.1.ii.A as referenced by 40CFR62.14353.b, 40CFR60.754.a.4.i as referenced by 40CFR62.14354.a, and 40CFR62.14356.b]
- 1) The City of Paso Robles shall comply with the compliance schedule and increments of progress identified in 40CFR62.14356. [40CFR62.14356.a and c.1]
 - 2) A notification, signed by the owner or operator of the landfill, shall be submitted to the APCO within 10 business days of completing each increment of progress. [40CFR62.1455.b]

- 6. Reporting.** Each report, due on the date indicated in the following table, should include data for the respective time periods as indicated. [SIP Rule 205]

Due Date	Semi-annual Data	Annual Data
January 31	July 1 through December 31 of the previous year	
July 31	January 1 through June 30 of the same year	July 1 of the previous year through June 30 of the same year

- a. On a semi-annual basis, the City of Paso Robles shall submit a report to the APCO, with a copy to the EPA Region IX Administrator. Each report shall be submitted no later than January 31 and July 31 of any given year; shall be certified to be true, accurate, and complete by a responsible official; and shall include the following information. [Rule 216.F.1.c.3 and, for the January 31 report, 40CFR60.757.f as referenced by 40CFR62.14355.a]
 - 1) Summaries of the data recorded under condition III.B.1.a-h. [SIP Rule 205 for III.B.1.d&e and District-only, Rule 206 for all other data]
 - 2) The location, date, and reason for any installation of a new LFG collection well. [District-only, Rule 206]
 - 3) A summary of any deviation from this permit's requirements. [Rule 216.F.1.c.3.i]
 - 4) If the City of Paso Robles is not in compliance with any federally-enforceable requirement, a progress report on the schedule of compliance that has been approved by the District Hearing Board. That report shall include: [Rule 216.F.2.c]
 - i. dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and
 - ii. an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
- b. On an annual basis, no later than July 31 of each year, the City of Paso Robles shall submit the following. A responsible official shall certify each report to be true, accurate, and complete.
 - 1) A Compliance Certification Report to the APCO pursuant to District Rule 216.L.3. This report shall identify each federal applicable requirement in this permit, the compliance status of each subject process unit, whether the compliance was continuous or intermittent since the last certification, and the method(s) used to determine compliance. A copy of this portion of the annual report shall also be submitted to the EPA Region IX Administrator. [Rule 216.L.3]

- 2) An NMOC emission rate report or, if the below criteria are met, a 5-year estimate of NMOC emissions. If site specific values are used to calculate those emissions, as allowed under condition III.B.5.a above, the next subsequent report that is submitted under this permit, and the next subsequent report submitted after a redetermination of the site-specific NMOC concentration, C_{NMOC} , shall contain detailed supporting information to justify the use of those values. [40CFR60.757.b as referenced by 40CFR62.14355.a]
 - i. The NMOC emission rate report shall contain an annual emission rate calculated using the procedures in condition III.B.5.a above. The report shall also contain all data, calculations, sample reports, and measurements used to estimate that emission rate. [40CFR60.757.b.1 and 757.b.2 as referenced by 40CFR62.14355.a]
 - ii. If the reported NMOC emission rate has been less than 50 megagrams per year in each of five (5) consecutive years of annual reporting, the City of Paso Robles may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of an annual report. [40CFR60.757.b.1.ii as referenced by 40CFR62.14355.a]
 - (a) The estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the five (5) years for which an NMOC emission rate is estimated.
 - (b) All data, calculations, sample reports, and measurements, upon which the estimate is based, shall be included.
 - (c) The estimate shall be revised at least once every five (5) years.
 - (d) If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the APCO. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

C. Compliance Testing. The City of Paso Robles shall conduct or cause to be conducted the following tests. All plan preparation, testing and reporting shall comply with the most recent version of the District's Source Test Policy, unless otherwise specified here. Specific to this operation and regardless of the direction in that policy, a source test plan shall be submitted at least thirty (30) working days prior to any test and the results shall be reported to the APCO within forty-five (45) calendar days of testing. [District-only, Rule 204.A.1 and District-only, Rule 210.B.1]

1. The City of Paso Robles shall conduct or cause to be conducted the following tests on a **biennial** basis. [Rule 216.F.1.c.1 for LFG sulfur content and District-only, Rule 204.A.1 for all others]

Location	Parameter	Units	Method & Notes
flare inlet	a. NMOC	lb/hr	EPA-25C [District-only, Rule 426.F.1]
	b. oxygen	vol%	CARB-100 [District-only, Rule 204.A.1]
	c. LFG flow rate	scfm	installed instrument [District-only, Rule 204.A.1]
	d. LFG heating value	Btu/scf	ASTM D 1946/3588 [District-only, Rule 204.A.1]
	e. LFG sulfur content	gr/dscf	(a), EPA-15/16 [Rule 216.F.1.c.1 and District-only, Rule 204.A.1]
flare outlet	f. NMOC	lb/hr	CARB-100 [District-only, Rule 426.F.1]
	g. NMOC	ppmv @3% O ₂ dry	CARB-100 [District-only, Rule 426.F.1]
	h. NMOC	destruction efficiency	District Rule 426.G.4 [District-only, Rule 426.F.1]
	i. oxygen	vol%	EPA-19 [District-only, Rule 204.A.1]
	j. exhaust flow rate	scfm	CARB-100 [District-only, Rule 204.A.1]
	k. NO _x	lb/mmBtu	CARB-100 [District-only, Rule 204.A.1]
	l. CO	lb/mmBtu	CARB-100 [District-only, Rule 204.A.1]

Additional Notes:

- (a) Sulfur content samples shall be analyzed within 24 hours of sampling. [District-only, Rule 206]
2. The City of Paso Robles shall conduct or cause to be conducted a landfill surface check for leaks along the gas transfer path on an **annual** basis. Monitoring shall be performed in accordance with section 4.3.1 of EPA Method 21, except that the probe inlet shall be held one-half inch (½") from the ground. Monitoring shall only be performed when the average wind speed is less than five (5) miles per hour and the instantaneous wind speed is less than ten (10) miles per hour. [District-only, Rule 206]

D. Conditions Specific to the Landfill Process

1. There shall be no landfill gas leaks from the gas wells, piping, flanges, valves, blowers, flame arresters, pipe fittings, sampling ports, or any other connections or fittings along the landfill gas transfer path of the landfill gas collection or control system. [District-only, Rule 426.E.8.a.3]
2. The City of Paso Robles shall maintain, monitor, operate, and improve the gas collection system and landfill cover to prevent leaks from all locations on the surface of the landfill along the gas transfer path of the gas collection system. [District-only, Rule 426.E.8.a.3]
3. Whenever previously buried waste is brought to the surface during installation or preparation of wells, trenches, piping, or other equipment, or when solid waste is to be excavated and moved, the owner shall cover the excavated waste using fresh soil, plastic sheeting, vapor retarding foam, or other CIWMB approved "Alternate Daily Cover," by the end of the working day or as necessary to prevent a public nuisance, whichever is sooner. Any asbestos containing material shall be handled in accordance with all state and federal regulations. [District-only, Rule 426.E.9]
4. The condensate from the gas collection system shall be collected, stored, and treated in a manner approved by the RWQCB and the CIWMB. [District-only, Rule 426.E.10]
5. The enclosed ground flare shall be in operation at all times while the device is receiving LFG. [District-only, Rule 206]

IV. Compliance Determination Fees. The following fee schedules shall apply to the indicated process units. [District-only, Rule 302.E]

Process	Fee Schedule (Rule 302.E)		Each
LFG collection and control system	28	landfill gas control	1